Marshalls
Civils and Drainage

Welcome to Marshalls Civils and Drainage
Introducing Water Management Solutions

Introduction

The National Planning Policy Framework (NPPF)

- Local plans to use opportunities offered by new development to reduce causes and impacts of flooding

- When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere

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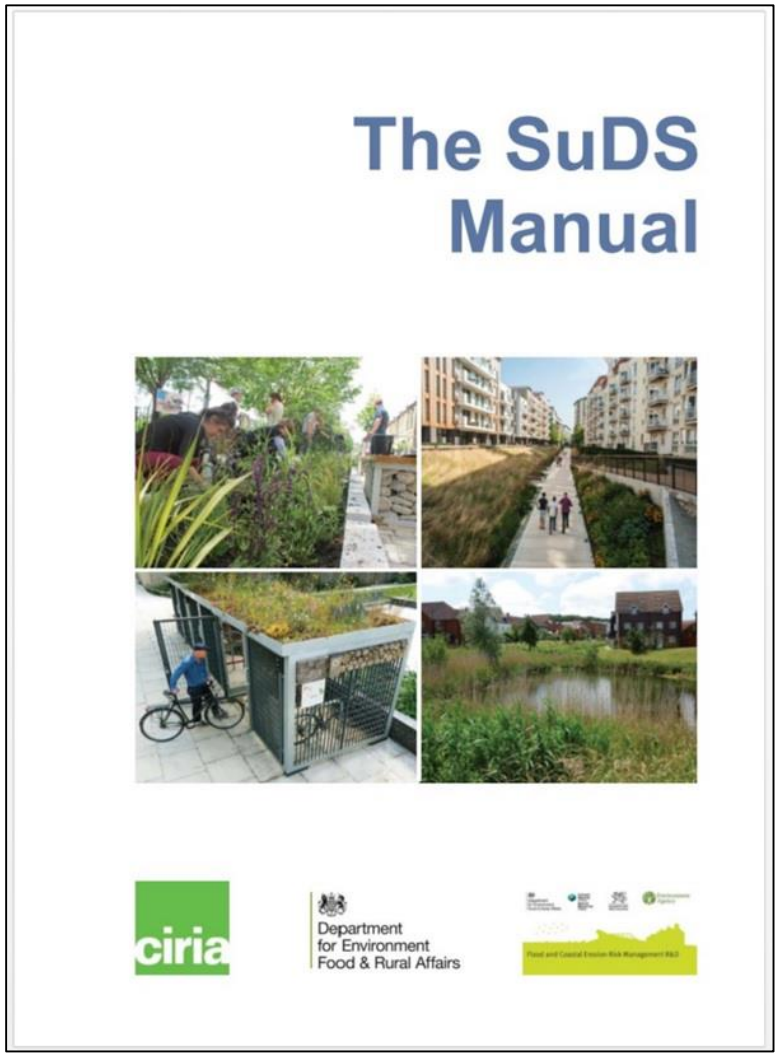
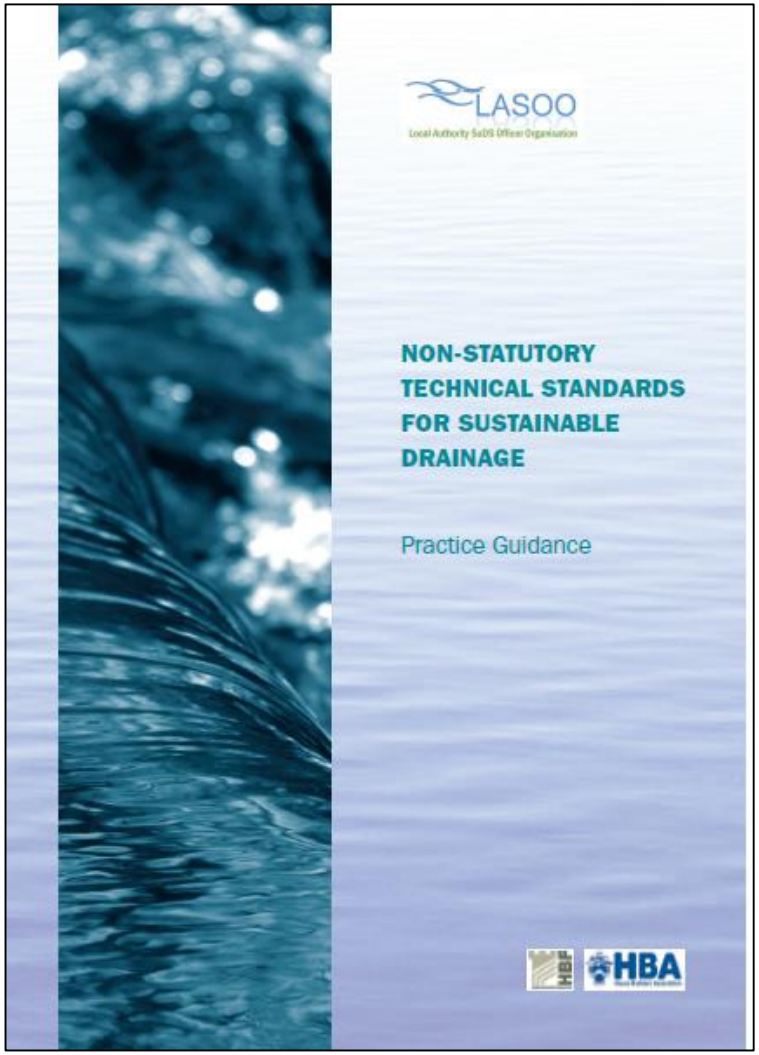
Flood & Water Management Act 2010

- Far-reaching requirements for SuDS on future construction work carried out in England and Wales
- Applies to construction work creating a building or other structure, “anything that covers land” that will affect the ability of land to absorb rainwater
- New buildings, roads and other paving could well be affected – as well as alterations that have drainage implications
- The Act may apply to work that does not need planning permission, or indeed

Building Regulations compliance, although applications for approval can be made with planning applications

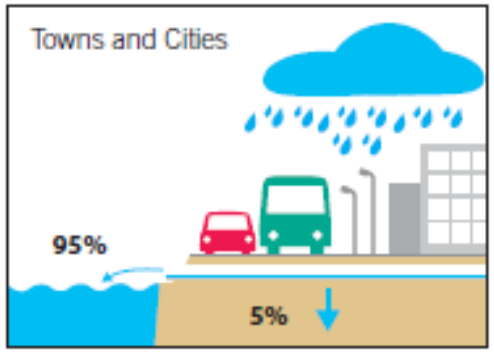
SuDS Standards and Guidance

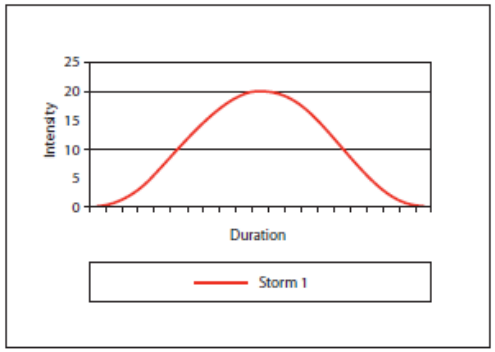


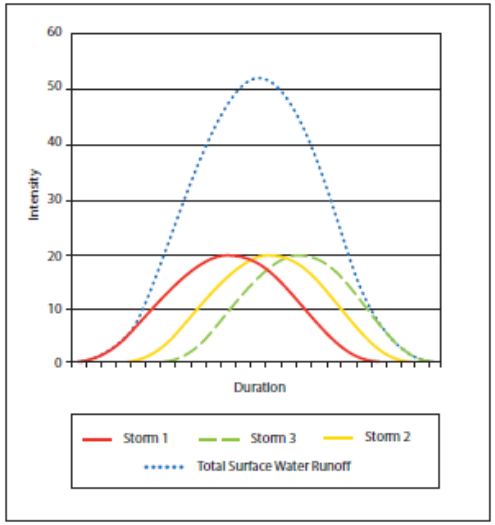


Impact of Urbanisation & Climate Change

- In densely populated urban areas up to 95% of rainfall becomes surface water runoff
- 50% increase since 1960s in 3 consecutive day storm occurrences
- continuing growth in volume of surface water
- In addition to the increased <u>volume</u> of water, the <u>rate</u> at which it runs off is much faster which increases flood risk.







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SuDS Principles

Replicating the response of a catchment and its surfaces by mimicking, to some extent, the behaviour of surface water on the developed site as if it had remained undeveloped

- Controlling surface water quantity (reducing off-site flow rates)
- Improving surface water quality (removing pollutants)
- Providing added amenity value (improving local environment)

SuDS Principles

a) Surface runoff is managed at its source where it is reasonably practicable to do so;
b) Surface runoff is managed on the surface where it is reasonably practicable to do so;
c) Public space is used and integrated with the drainage system, where it serves more than one property and it is reasonably practicable to do so;
d) Design is cost-effective to operate and maintain over the design life of the development, in order to reduce the risk of the drainage system not functioning
e) Design of the drainage system accounts for the likely impacts of:
   - climate change; and
   - changes in impermeable area;

   over the design life of the development, where it is reasonably practicable to do so.

The following destinations must be considered for surface runoff in order of preference:

1. Discharge into the ground
2. Discharge to a surface water body
3. Discharge to a surface water sewer
4. Discharge to a combined sewer